REMARKS

Claims 3-11 and 14-25 remain in this application, with Claims 1-2 and 12-13 cancelled and Claims 3-6, 14-17, 19-21 and 23-25 amended. Applicant respectfully requests reconsideration and review of the application in view of the foregoing amendments and the following remarks.

At the outset, Applicant acknowledges with appreciation the indication of allowable subject matter in Claims 3, 4, 6, 14, 15, 17, 19-20 and 23-25. Per the Examiner's suggestion, Applicant has redrafted Claims 19, 20, 23 and 25 to independent form including all limitations of the base claim and any intervening claims. These claims are now in condition for allowance.

The Examiner rejected Claims 3-6, 14-17, 21, and 24 under 35 U.S.C. § 112, second paragraph, as indefinite. Applicant has amended the claims as recommended by the Examiner. The claims are now deemed sufficiently definite.

Before addressing the merits of the remaining rejections based on prior art, Applicant provides the following brief description of the invention. The present invention provides a system and method for improving transmission rates in RFID base stations by implementing forced frequency "hops." In a preferred embodiment of the present invention, the RFID base station is adapted to calculate whether the next transaction can be performed over the current carrier frequency or whether a "hop" to a new carrier frequency should be forced. More particularly, in one embodiment of the present invention, a base station processor (in conjunction with program information stored in a base station memory) is adapted to (i) determine the amount of time available on a particular carrier frequency (e.g., pursuant to FCC regulations, European Telecommunications Standardization Institute (ETSI) regulations, etc.), (ii) determine the amount of time it would take to perform a particular transaction, and (iii) force the base station to "hop" to another carrier frequency if the transaction time is longer than the available time. Such a system improves transmission rates by forcing a "hop," as opposed to dwelling, when the transaction time is longer than the available time.

The Examiner rejected Claims 5, 7-11, 16 and 18 under 35 U.S.C. § 103(a) as being unpatentable over McLean in view of Flammer, III et al. This rejection is respectfully traversed.

McLean discloses a radio frequency communication system that is automatically adjusted in order to define a read zone and a no-read zone. The adjustments that are made all relate to the transmitting range of the communication system such that transponders located within the read zone can communicate with a central controller, but that transponders located outside the read zone (i.e., in the no-read zone) cannot receive messages or communicate with the controller. McLean does not disclose a frequency hopping spread spectrum communication system, and does not disclose any variation in the hopping sequence in order to communicate messages having a duration longer than a remaining dwell time at a particular carrier frequency of the hopping sequence. Accordingly, McLean appears to have little in common with the present application.

Flammer, III et al. discloses a wireless packet communication system in which messages are communicated among nodes in accordance with a frequency hopping spread spectrum system. While Applicant acknowledges that Flammer, III et al. addresses a similar issue of managing communications of messages having a duration longer than the dwell time at a particular frequency, the reference proposes to solve this problem in a substantially different way than the present invention. Particularly, the reference will hop to a frequency that is different than the next one in the predetermined sequence. The transmitter will then remain at this different frequency until the message is sent, and thereafter will return to the appropriate frequency in the hopping sequence. A significant drawback of this solution is that the central controller would be unable to receive any messages during this time, since it is not at the right frequency in the hopping sequence. In contrast, the present application provides a communication system in which a transmitter will hop early to the next frequency in the predetermined hopping sequence and transmit the message at this next frequency. As a result, the

central controller remains substantially within the predetermined hopping sequence and is less likely to miss any other incoming messages, unlike Flammer, III et al.

Applicant has amended Claims 5 and 16 to clarify this distinction from the proposed combination of references. In particular, the proposed combination of references fails to suggest or disclose, *inter alia*, a processor adapted to "determine the amount of time available on a first carrier frequency of the hopping sequence; determine the amount of time it would take to perform a particular transaction, wherein said particular transaction is a transmission of a particular RF signal, such that said processor is adapted to determine the amount of time it would take to transmit said particular RF signal; and change to a second carrier frequency of the hopping sequence before said amount of time available on said first carrier frequency expires when said amount of time on said first carrier frequency is less than said amount of time it would take to perform said particular transaction," as defined in Claim 5.

Likewise, the proposed combination of references fails to suggest or disclose, *inter alia*, a communication method comprising "performing a first transaction with at least one RFID transponder over a first carrier frequency of a predetermined frequency hopping sequence; determining the amount of time available on said first carrier frequency; determining the amount of time it would take to transmit a particular radio frequency (RF) signal; forcing said RFID base station to hop to a second carrier frequency in the predetermined hopping sequence before said amount of time available on said first carrier frequency expires when said amount of time on said first carrier frequency is less than said amount of time it would take to transmit said particular RF signal," as defined in Claim 16. This ground of rejection should therefore be withdrawn.

The Examiner also rejected Claims 21 and 22 under 35 U.S.C. § 102(e) as anticipated by Fry. This rejection is respectfully traversed.

Fry discloses a video surveillance system that communicates high resolution video signals using a frequency hopping spread spectrum (FHSS) transmitter. The FHSS hop duration and tuning frequency of each frequency hop is selected to permit

sensing and modulation of the video signal source. As acknowledged by the Examiner, "Fry does not explicitly state determining the amount of time available on the first carrier frequency and determining the amount of time it would take to transmit a particular RF signal." Nevertheless, the Examiner concludes that these teachings are inherent. Applicant respectfully disagrees.

In Fry, the composite video signal contains horizontal and vertical frame synchronization signals that occur at regular, predetermined intervals, permitting the transmitter to be pre-programmed to synchronize timing of individual frames to the hopping rate. See page 5, para. 0051. Hence, there is no need for a determination as to whether a particular RF signal should be transmitted over a first or second carrier frequency based on the time available at that frequency. This differs from the present invention, in which messages occur at irregular intervals and have differing lengths. In an embodiment referenced by the Examiner, the Fry transmitter will hop in sub-multiples of the vertical re-trace interval. But, when the video signal is longer than the available time, the Fry system will simply truncate the remaining portion of the video signal. See page 5, para. 0058 ("So, hopping dead time 108 will 'eat into' the picture, which means a few horizontal video lines may be sacrificed in the hopping, and then when video is back on, a little bit of the video picture is sacrificed, either in the lead (or top) of the picture or the bottom of the picture.") This may be acceptable when transmitting video surveillance information, in which loss of a peripheral portion of the image may be tolerated, but would not be acceptable in wireless network communication system in which each message carries important information. Fry therefore fails to suggest or disclose the limitations of Claims 21-22.

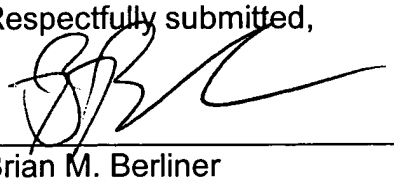
More specifically, Fry fails to suggest or disclose, *inter alia*, the steps of: "determining the amount of time available on said first carrier frequency; determining the amount of time it would take to transmit a particular RF signal; transmitting a second RF signal over said first carrier frequency when said amount of time available on said first carrier frequency is greater than said amount of time it would take to transmit said

particular RF signal; and transmitting a second RF signal over a second carrier frequency when said amount of time available on said first carrier frequency is less than said amount of time it would take to transmit said particular RF signal," as defined in Claim 21. This ground or rejection should be withdrawn.

In view of the foregoing, the Applicant respectfully submits that Claims 3-11 and 14-25 are in condition for allowance. Reconsideration and withdrawal of the rejections and objections is respectfully requested, and a timely Notice of Allowability is solicited. To the extent it would be helpful to placing this application in condition for allowance, the Applicant encourages the Examiner to contact the undersigned counsel and conduct a telephonic interview.

Our check in the amount of $800.00 is enclosed for the later presentation of four independent claim(s) in excess of three, pursuant to 37 C.F.R. § 1.16(h). The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,



Date: February 27, 2006

Brian M. Berliner
Attorney for Applicant
Registration No. 34,549

O'MELVENY & MYERS LLP
400 South Hope Street
Los Angeles, CA 90071-2899
Telephone: (213) 430-6000

UNITED STATES POSTAL SERVICE®

Track & Confirm

Search Results

Label/Receipt Number: **EV69 7449 825U S**
Detailed Results:

- **Delivered, March 01, 2006, 8:44 am, ALEXANDRIA, VA 22313**
- **Arrival at Unit, March 01, 2006, 7:46 am, DULLES, VA 20102**
- **Enroute, February 28, 2006, 4:48 pm, LOS ANGELES, CA 90009**
- **Enroute, February 27, 2006, 8:03 pm, LOS ANGELES, CA 90009**
- **Acceptance, February 27, 2006, 7:16 pm, LOS ANGELES, CA 90009**

< Back

Return to USPS.com Home >

Track & Confirm

Enter Label/Receipt Number.

Notification Options

Track & Confirm by email

Get current event information or updates for your item sent to you or others by email. Go >

Proof of Delivery

Verify who signed for your item by email, fax, or mail. Go >